



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,737	11/26/2003	Hee Seok Roh	K-0583	3954
34610	7590	08/14/2006		
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			EXAMINER PATEL, RITA RAMESH	
			ART UNIT 1746	PAPER NUMBER
DATE MAILED: 08/14/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,737

Applicant(s)

ROH, HEE SEOK

Examiner

Rita R. Patel

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgement has been made of applicant's claim for priority under 35 U.S.C. 119; this application claims the benefit of Korean Application No. 10-2002-0074991 filed on November 28, 2002.

Drawings

The drawings received 11/26/03 are acceptable for examination purposes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuller et al. herein referred to as "Tuller" (Us Patent No. 5,662,744), and further in view of Rabuffetti (US Patent No. 4,094,702).

Tuller teaches a dishwasher 10 including an upper rack 30 and lower rack 32 for holding objects to be washed, with a wash arm 34 therein for dispensing a controlled spray of water onto the objects in the racks 30, 32 (col. 2, lines 33, 41-42, 45-47). The wash arm has an open channel through which water from a supply hose is directed; the

Art Unit: 1746

channel has opposite curved ends with discharge openings through which the water is sprayed onto objects to be washed in the dishwasher. The flow of water through the channel and the curved ends impart rotation to the wash arm. In a preferred embodiment, the open channel is downwardly facing. In an alternative embodiment, the open channel is directed upward (abstract). In the invention of Tuller, it is disclosed that the wash arm includes a supply hose 26 that is fixed to the wash arm at its central point, hub 52. As seen in Figure 2, the Tuller spray assembly is symmetric about a horizontal plane.

Although Tuller discloses a spray assembly which reads on applicant's claim for a first nozzle for selectively spraying in a first and second direction, Tuller fails to stately describe specific means for setting the spray direction. However, Rabuffetti teaches an apparatus for washing dishes allowing independent control of washing liquid flow to upper and lower baskets by valve means, allowing selective reduction of liquid flow to an upper washing arm and/or by-passing liquid so that it does not flow through the washing arm nozzles (abstract). Rabuffetti proposes to achieve flexibility in a dishwashing machine by providing it with a device for controlling the water/soap flow rate in each of the spray devices directly. Thus with said dishwasher, in some stages of the operative washing cycle the spray devices can receive water/soap at variable and differentiated flow rates, or some devices can be completely closed off (col. 1, lines 32-42). The dishwashing machine is provided with a single tube 1 for supplying from the machine circulating pump water/soap through nozzles 3 of both of the rotating spray devices 2. The supply for the top spray device passes through valve 5 (col. 2, lines 19-

Art Unit: 1746

27); thus teaching a circulating pump and means for a manually settable valve capable of controlling liquid flow to the spray device. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate such manual means for controlling liquid flow into the top spray device as taught by Rabuffetti, to the spray arm invention of Tuller to achieve optimum washing and providing the user with maximum use of flexibility without significant increase in cost (col. 1, lines 47, 57-58), as well as save resources, such as water and energy for environmental purposes. Moreover, because the operation of the rotating spray nozzles are dependent on water flow therein for rotation, it is inherently accepted that the lack of water flow results in the lack of rotation of said nozzle. Therefore, the spray nozzle of Tuller, further in view of manual means for operation taught by Rabuffetti, implicates that the rotation of the spray nozzle is also manually operated. When the spray nozzles are manually selected to have water flowing therein, then the spray nozzles will rotate; conversely, when the spray nozzles are manually selected to have no water flowing therein, the spray nozzles will not rotate. By manipulation of the liquid control valve, the upward and downward channels of Tuller would be rotatable by manipulation of one another, taking into consideration that if one channel was closed, then rotation would be possible only through delivery of water through the other channel and vice versa.

Tuller teaches a wash arm 34 which may also be used at the bottom of the washing chamber 14 (col. 2, lines 47-50), where the lower rack 32 is held. Similarly, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the circulating pump of Rabuffetti to Tuller's spray arm, to perform known

Art Unit: 1746

means for circulation of washing water in a dishwashing apparatus, for achieving optimum washing, efficient use of water resources, and efficiently using energy resources, as aforementioned. The upper and lower channels of Tuller are disposed parallel to the upper 30 and lower racks 32. The spray arm of Tuller consists of two sides, an upper and lower side, whereby the upper channel is located on the upper side and includes a plurality of holes called discharge openings 76, 77 for dispersing water therefrom in an upward direction (col. 3, lines 61-65). Also, as seen in Figure 1 of Tuller, the central hub 52 allows for a 180 degree rotation about the central axis of the hub.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuller and Rabuffetti as applied to claim 3 above, and further in view of Bowen (US Patent No. 4,961,597).

Tuller and Rabuffetti teach the claimed invention, except fail to specifically state the connection means of the spray nozzles on the spray arm. Bowen, however, discloses that it is known that spray nozzles that are utilized in areas where a spray of liquid is required, such as in dishwashers, can be mounted on tubular headers which have been drilled to provide a communicating hole and are secured to the headers by means of a spring clip. The nozzles comprise a body and a nozzle ball. The body is provided with a spigot for extending into the header hole, surrounded by an o-ring receiving groove and a saddle shaped surround corresponding to the header surface around the hole (col. 1, lines 13-15, 18-25). Such O-ring spray nozzles, as taught by

Art Unit: 1746

Bowen to be known for use in dishwashing apparatuses, would have been obvious to one of ordinary skill in the art at the time of the invention to be incorporated in dishwasher of Tuller-Rabuffetti in order to achieve liquid spray nozzles that embody resilient seals, provide a small increase in effective diameter which results in a significant increase in the effective area, and allow for accommodation of the deformation of the sealing ring to a saddle-like shape when sealing around the edge of the hole, while retaining the distal portion in sealing engagement with the spigot (col. 1, lines 56; col. 2, lines 15-16, 34-37). Bowen states that the sealing for the o-ring is formed of a resilient material, thus reading on applicant's claim for a rubber based material.

As shown by Tuller in Figure 8, a stepped surface for receiving said pair of o-rings is formed; the opening in the inverted U-shaped channel 36 is directed downwardly (col. 2, lines 64-65), hence forming a stepped surface.

Conclusion

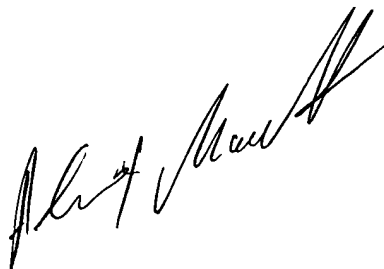
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RRP



ALEXANDER M. [unclear]
PRIMARY EXAMINER